

Glacier Bay National Park and Preserve will continue to manage vessel quotas and operating requirements through public outreach efforts, educational materials, and ranger patrols in Glacier Bay. Vessel activity in Dundas Bay will be monitored, as necessary, to ensure protection of park resources and values, to better understand use, and to address management and safety considerations. Private vessel operators will still be required to obtain their vessel permits from the Visitor Information Station in Bartlett Cove when they first enter Glacier Bay, where they will also be required to participate in a vessel operator orientation.

The marine vessel emissions program will continue to be used to observe, report, and enforce opacity requirements, in accordance with existing authorities.

Lack of compliance with requirements can be addressed through administrative and/or criminal procedures.

STUDIES AND MONITORING

The 1996 vessel management plan resulted in a research program that identified numerous information and management needs associated with determining appropriate levels of vessel traffic and designing mitigation measures to protect resources in Glacier Bay. A number of the studies identified in the 1996 vessel management plan have been accomplished, and information from those studies is included in the EIS. These include, but are not limited to, studies identified in table 4.

TABLE 4: SUMMARY OF STUDIES FOR GLACIER BAY

Study	Status
Impacts of vessel disturbances on Steller sea lions	Completed in 2000
Disturbance of harbor seals by motorized vessels in Johns Hopkins Inlet	Completed in 2001
Development of coastal monitoring protocols and process-based studies	Completed in 2001
Mapping the benthic habitat in Glacier Bay, Alaska	Partially completed in 2001
Pilot study on humpback whale foraging	Completed in 2002
Underwater ecology of selected marine communities in Glacier Bay	Completed in 2003
Distribution and abundance of small schooling fish	Completed in 2003
Monitoring underwater noise in Glacier Bay National Park	Ongoing
Disturbance of harbor seals at a terrestrial haul-out in Glacier Bay National Park	Ongoing
Population characteristics of humpback whales in Glacier Bay and adjacent waters	Ongoing
Opportunistic sightings of marine mammals in Glacier Bay National Park	Ongoing
Humpback whale vocalizations in Glacier Bay: their frequency and occurrence	Ongoing
Coastal resources inventory and mapping project	Ongoing
Marine predator distribution in Glacier Bay National Park	Ongoing
Fjord oceanographic processes in Glacier Bay, Alaska	Ongoing

Topics for continuing or future studies and monitoring are:

- *Vessel Noise*: Additional information regarding surface and subsurface vessel noise levels, including studies evaluating underwater sound produced by cruise ships traveling at high speeds, will provide a better understanding of the effects of vessel noise on marine mammals and other biota.

- *Humpback Whales:* Continued humpback whale monitoring will add to the existing information base regarding abundance, movement, distribution, and population trends. Monitoring will continue to identify whale concentration areas that could warrant designation as temporary whale waters or imposition of a 13-knot speed limit in Glacier Bay for vessels greater than or equal to 262 feet (80 meters) in length.
- *Air Quality:* Visibility condition observations will assess the effect of vessel emissions, particularly cruise ships, on visibility under various meteorological conditions. These observations also could provide information regarding the presence of haze. Visibility monitoring is scheduled for summer 2004.
- *Harbor Seals:* Studies will examine harbor seals in Glacier Bay, including the effects of predation, vessels, and subsistence harvest outside of Glacier Bay National Park.
- *Visitor Use:* Surveys of visitor expectations will improve the park's understanding of visitor uses and experiences.
- *Vessel Operating Requirements:* A study of the effectiveness of vessel operating requirements will provide information regarding operator compliance and vessel regulatory complexity.

Science Advisory Board and Research Framework

The determination of whether to increase seasonal-use day quotas for cruise ships will rely on criteria that define the environmental and social conditions to be met before any additional seasonal-use days are approved. These criteria will be based on the results of and guidance provided through studies that examine the effects of vessels on all park resources and visitor experience. Studies will be identified in a research framework developed with the assistance of a science advisory board. This research framework will identify the studies necessary to provide information regarding the effects of vessel traffic on the environment and develop monitoring information necessary for park management.

National Oceanic and Atmospheric Administration (NOAA) Fisheries Recommendations

NOAA Fisheries made four conservation recommendations in the 2003 biological opinion:

1. NPS should "continue to monitor the levels of disturbance from vessels and vessel noise in Glacier Bay National Park waters to determine the occurrence at which a take of Steller sea lions and humpback whales occurs as a result of the proposed action." Upon determination of appropriate take levels, and issuance of regulations or authorizations under section 101(a)(5) of the Marine Mammal Protection Act (MMPA) and/or its 1994 amendments, NOAA Fisheries would amend the opinion to include an Endangered Species Act (ESA) incidental take statement for listed species in the action area. No increases in cruise ship entries into Glacier Bay from the 2003 levels should occur until these determinations have been made.
2. NOAA Fisheries expressed concern regarding the potential for collisions to occur, resulting in serious injury or mortality to a whale, especially because as numbers of whales and vessels increase, the probability of collision would likely increase. The Park Service should "continue to monitor the occurrence of whales in nearshore waters to determine if maximizing private vessel-use in Glacier Bay by increasing the number of seasonal-use days for private vessels results in increased disturbances to marine mammals, including sea lions on rocks or foraging whales."

3. Given that vessel length and speed are important factors in the severity of whale/vessel collisions, and that NOAA Fisheries included waters immediately adjacent to the park entrance in Icy Strait and at Point Adolphus as part of the action area examined in the biological opinion, and that the large whale concentration at Point Adolphus, a popular whale-watching location for vessels entering and exiting NPS waters, is not protected by vessel speed limits, NOAA Fisheries made the following recommendation. “The Park Service should work with NOAA Fisheries, the U.S. Coast Guard, and the State of Alaska to implement vessel speed limits, or exclusion zones in nearshore waters of Icy Strait (i.e., within 1 mile [1.6 kilometers] of Point Adolphus) adjacent to park waters that contain known concentrations of whales, or establish agreements with cruise ship and tour vessel concessioners whereby vessel speed and course restrictions are adopted beyond the NPS boundaries in these areas where whales are known to forage and occur in large numbers.”
4. NOAA Fisheries concluded that the proposed increases in vessel traffic are occurring in an area where disturbance and collision risk are already a concern, and in absence of a quantitative determination of ESA and MMPA take levels. “It is NOAA Fisheries’ recommendation, therefore, that the Park Service should monitor and evaluate its vessel operating requirements to determine whether they are effective at protecting whales in these nearshore waters.” Two essential elements of this recommendation are measurements of compliance and effectiveness of regulations.

The Park Service will continue to work with NOAA Fisheries to address these recommendations.

PUBLIC INVOLVEMENT

The NPS has sought public comment throughout the EIS process, and the EIS was modified as a result of public comments received. The alternatives and topics considered in the DEIS resulted from comments received during the public scoping process and internal agency discussions. The NPS preferred alternative in the DEIS was modified for the FEIS based on public comments received on the DEIS. In reaching a decision, NPS has carefully considered the comments and concerns expressed by the public. The modifications NPS has made to the preferred alternative presented in the FEIS, as discussed previously, also were made in response to public comments as well as additional agency consideration.

A *Notice of Intent* to prepare an EIS, published in the *Federal Register* on February 22, 2002 (67 FR 8313), formally initiated the Park Service’s planning and EIS effort and public scoping. Another notice, extending the public scoping period through June 7, 2002, was published in the *Federal Register* on May 6, 2002 (67 FR 30399). Public input was solicited early in the project through distribution of a newsletter, telephone communications, electronic mail, media announcements, and meetings. A series of public open houses in Anchorage, Juneau, Gustavus, Hoonah, Pelican, and Elfin Cove, Alaska, and in Seattle, Washington, provided opportunity for the interested public to learn about and provide suggestions regarding the issues and information to be included in the DEIS.

Several consultations took place with government agencies, including the Hoonah Indian Association, a federally recognized tribal government; the State of Alaska; NOAA Fisheries; and the U.S. Fish and Wildlife Service. Formal endangered species consultation took place with NOAA Fisheries for the endangered humpback whale, the endangered western stock of Steller sea lions, and the threatened